

Notic of Allowability	Application No.	Applicant(s)	
	09/454,870	PATEL, SUJAL	
	Examiner	Art Unit	
	Kenneth R Coult r	2141	

-- The MAILING DATE of this communication appears on th cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due cours . **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to the interview of 12/10/04.
2. ☒ The allowed claim(s) is/are 1,3-6,8,11-13,15-18,20-22,24-26,28-33,35,37-45,48-51,55-57,61-74,76 and 77.
3. ☒ The drawings filed on 03 December 1999 are accepted by the Examiner.
4. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 - a) ☐ All b) ☐ Some* c) ☐ None of the:
 1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

* Certified copies not received: _____.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.

THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

5. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
 6. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
 - (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
 - 1) ☐ hereto or 2) ☐ to Paper No./Mail Date _____.
 - (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
7. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

- | | |
|---|--|
| 1. <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 5. <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 2. <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 6. <input checked="" type="checkbox"/> Interview Summary (PTO-413),
Paper No./Mail Date _____. |
| 3. <input type="checkbox"/> Information Disclosure Statements (PTO-1449 or PTO/SB/08),
Paper No./Mail Date _____ | 7. <input checked="" type="checkbox"/> Examiner's Amendment/Comment |
| 4. <input type="checkbox"/> Examiner's Comment Regarding Requirement for Deposit
of Biological Material | 8. <input checked="" type="checkbox"/> Examiner's Statement of Reasons for Allowance |
| | 9. <input type="checkbox"/> Other _____. |

EXAMINER'S AMENDMENT

1. An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it **MUST** be submitted no later than the payment of the issue fee.

Authorization for this examiner's amendment was given in a telephone interview with Eric M. Nelson on 12/10/04 and 12/12/04.

2. The application has been amended as follows:

Claim 1 A method aggregating a plurality of data packets on a server computer, the method comprising:

determining a server load of the server computer; and
in response to determining the server load, accumulating the plurality of data packets into an aggregated data packet until a size of the aggregated data packet exceeds a minimum threshold size without exceeding a maximum threshold size, and wherein the minimum threshold size and the maximum threshold size is related to the server load.

Claim 17 A server computer for aggregating data packets via a communications network, the server computer comprising:

a data memory operative to store a plurality of data packets; and
a server program stored in a program memory for determining a server load and for, in response to determining the server load, repackaging at least two of the plurality of data packets into a single data

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packet having a size; and for initiating the transmitting of the data packets to the communications network, wherein single data packet size exceeds a minimum threshold size without exceeding a maximum threshold size, and wherein the minimum threshold size is set as a function of the load of the server computer.

Claim 26 A system aggregating a plurality of data packets on a server computer, the system comprising:

means for determining a server load; and

means for in response to determining the server load, accumulating the plurality of data packets into an aggregated data packet until a size of the aggregated data packet exceeds a minimum threshold size without exceeding a maximum threshold size, and wherein the size of the minimum threshold size is related to the server load.

Claim 28 A system for aggregating data packets, the system comprising:

a plurality of data packets that collectively comprise one or more streamable data objects; and

a server computer operably connected to a client computer via a network, the server computer transmitting the data objects to the server computer, the server computer periodically determining, based upon the load of the server computer, whether to aggregate one or more of the data packets into an aggregated data packet having a size, wherein the size of the aggregated data packet exceeds a minimum threshold size without exceeding a maximum threshold size, and wherein the minimum threshold size is dependent on the load of the server computer.

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Claim 40 A method of aggregating data packets, the method comprising:

determining, based upon the load of a server computer, whether to aggregate one or more of the data packets into an aggregated data packet with a size, wherein the size of the aggregated data packet exceeds a minimum threshold size without exceeding a maximum threshold size, and wherein the minimum threshold size is related to the load of the server computer; and

transmitting the aggregated data packet to a client computer.

Claim 55 A method of generating data packets, the method comprising:

determining, in a server device, a maximum transmission unit value of an intermediary network device being disposed on the network between a client device and the server device, the maximum transmission unit value identifying a largest packet size that is capable of being transported by the intermediary network device via the network; and

generating a data packet with a size of the data packet size being limited to the maximum transmission unit value and exceeding a minimum threshold size without exceeding a maximum threshold size, wherein the minimum threshold size is related to the load of the server device.

Claim 61 A computer readable media storing instructions that when executed performs the steps comprising:

determining, in a server device, a maximum transmission unit value of an intermediary network device being disposed in a network between a client device and the server device, the maximum transmission unit value

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identifying a largest packet size that is capable of being transported by the intermediary network device via the network; and

generating a data packet with a minimum packet size, without exceeding a maximum packet size, the minimum packet size being set at least in part as a function of the load of the server device.

Claim 64 A method comprising:

determining, in a transmitting device, a maximum transmission unit value of an intermediary network device being disposed on a network between a receiving device and the transmitting device, the maximum transmission unit value identifying a largest packet size that is transported by the intermediary network device via the network;

generating a data packet with a minimum size, without exceeding a maximum threshold size, the minimum size being set at least in part as a function of load of the server device; and

transmitting the data packet to the receiving device via at least in part the intermediary device.

Claim 67 A method comprising:

determining, in a transmitting device, a maximum transmission unit value of an intermediary network device disposed on a network between a receiving device and the transmitting device, the maximum transmission unit value identifying a largest packet size that is capable of being transported by the intermediary network device;

aggregating data packets to ensure a size of the aggregated data packets exceed a minimum threshold value without exceeding a maximum threshold size, the minimum threshold value being set at least in part as a function of load of the transmitting device; and

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transmitting the aggregated data packets to the receiving device via at least in part the intermediary device.

Claim 73 A method aggregating a plurality of data packets on a server computer, the method comprising:

determining a server load of the server computer;

in response to determining the server load, accumulating the plurality of data packets into an aggregated data packet until a size of the aggregated data packet exceeds a minimum threshold size without exceeding a maximum threshold size, and wherein the minimum threshold size is related to the server load; and

wherein the server load is a function of a number of computers that are behind in a scheduled delivery time.

Cancel claim 75.

REASONS FOR ALLOWANCE

3. The following is an examiner's statement of reasons for allowance:

Miller (U.S. Pat. No. 6,014,707) discloses a **maximum size** of an individual data packet wherein the "server 12, upon receiving a request, may further reduce the size and rate of data packets that will be used for the transfer, depending on the current loads of both the server 12 and the network 10." (col. 5, lines 38 – 49).

Miller does not specifically disclose or remotely suggest aggregating data packets until the size exceeds a minimum threshold size without exceeding a maximum threshold size, wherein the **minimum threshold size is related to the server load**.

Shaffer (U.S. Pat. No. 6,003,089) discloses a packet size that is kept above a predetermined minimum size. Received packets are held and combined until the combined/larger packet size is greater than the ***predetermined*** minimum size. (col. 9, lines 53 – 64).

Shaffer does not specifically disclose or remotely suggest aggregating data packets until the size exceeds a minimum threshold size without exceeding a maximum threshold size, wherein **the minimum threshold size is *related to the server load***.

4. Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

5. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Kenneth R Coulter whose telephone number is 571 272-3879. The examiner can normally be reached on 5 4 9.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Rupal Dharia can be reached on 571 272-3880. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

krc

KENNETH R. COULTER
PRIMARY EXAMINER
